

## **Processing & Exploitation**





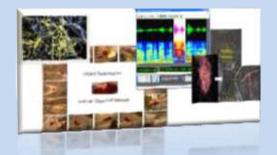




## **CHALLENGES**

- Manage, process, exploit current massive amounts of ISR data flows to analyze Patterns of Life
- > Infer relationships and assessment of the current situation
- Exploit targets in denied areas
- > Process actionable ISR information via high performance massively-parallel systems
- > Energy efficient computing for SWAP-constrained at-the-sensor processing





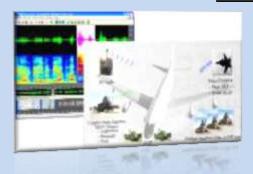
- Mission archive, mining, and dissemination, real-time motion statistics and analysis
- 4x increase (500 MHz to 2GHz) in digital bandwidth processing
- Embedded HPC for City-wide (10-20 km) persistent surveillance

## Mid (FY16 - FY20)



- Text understanding: ID of entities in a social network in <2 weeks vs 6 months, 12x reduction
- Automatic discovery of 80% of relevant activities
- 3-layer stacked logic with core to core communication, 2x system energy performance

## Far (FY21 - FY25)



- Autonomous data processing and exploitation
- Exascale computing applications for C4ISR
- High performance complex autonomous processing and decision making systems